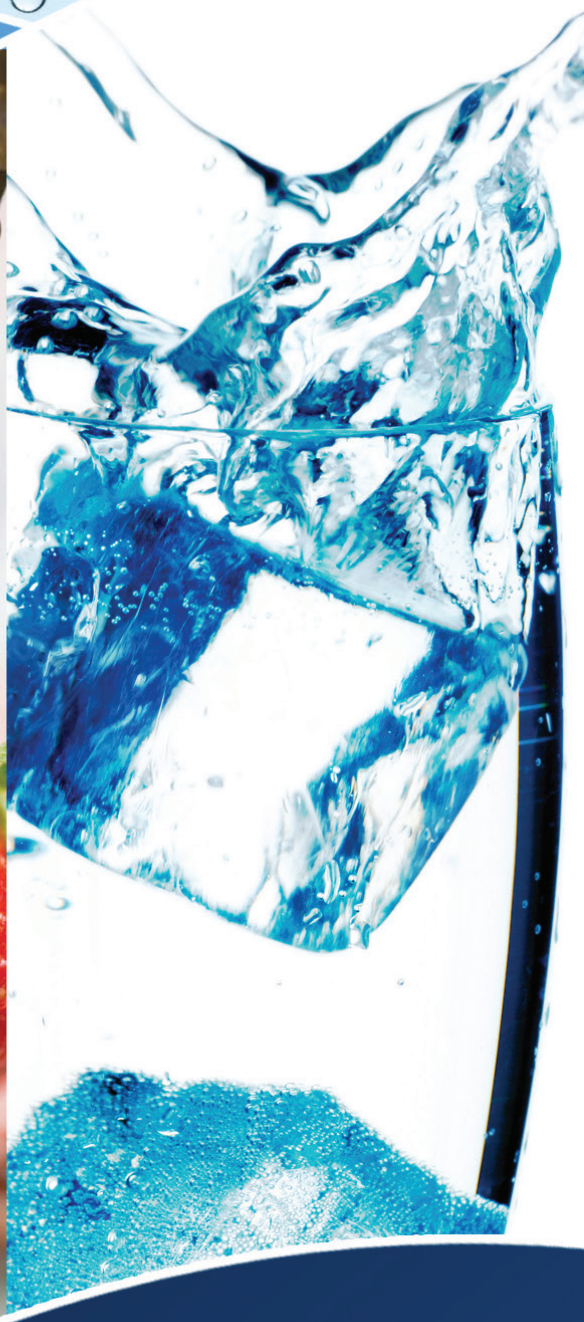
ANNUAL WATER QUALITY REPORT

Water Testing
Performed
in 2014



Presented By
City of Vineland

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Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation's drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Vineland City Council meets the second and fourth Tuesdays of each month beginning at 6 p.m. at City Hall, Seventh and Wood Streets, Vineland, New Jersey.

Where Does My Water Come From?

The City of Vineland Water Utility's customers are fortunate because we enjoy an abundant water supply from groundwater. Our groundwater supply is not exposed to air and is not subject to direct pollution and contamination like a river or reservoir. In fact, groundwater is the highest quality water available to meet public health demand of water intended for human consumption.

All 13 municipal wells draw water from the Kirkwood-Cohansey aquifer at depths ranging from 160 feet to 200 feet. This aquifer holds an estimated 17 trillion gallons of water beneath the pristine Pinelands, a million-acre protected reserve. Combined, our pumping and treatment facilities can provide roughly 3.3 billion gallons of drinking water every year.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Michael S. Lawler, Superintendent, at (856) 794-4056.

Protecting Your Water Source: What is SWAP?

SWAP (Source Water Assessment Plan) is a program of the New Jersey Department of Environmental Protection (NJDEP) for the study of existing and potential threats to the quality of public drinking water sources throughout the state. Sources are rated depending upon their contaminant susceptibility.

The NJDEP has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at http://www.nj.gov/dep/watersupply/swap/index.html or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact Michael S. Lawler at (856) 794-4056.

Vineland Water Utility is a public water system consisting of 13 wells with source water coming from Kirkwood-Cohasey aquifer.

	PATHOGENS			NUTRIENTS			PESTICIDES			VOLATILE ORGANIC COMPOUNDS			INORGANICS			RADIONUCLIDES			RADON			DISINFECTION BY-PRODUCT PRECURSORS		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells – 13		4	9	11	2			9	4	12		1	7	6		13				13			12	

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, NJDEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Source water protection is a long-term dedication to clean and safe drinking water. It is more cost effective to prevent contamination than to address contamination after the fact. Every member of the community has an important role in source water protection. NJDEP recommends controlling activities and development around drinking water sources whether it is through land acquisition, stormwater drain protection, or hazardous waste collection programs.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Violation Information

In 2014, the NJDEP sampled well TP004008 (well 4) for ethylene dibromide (EDB). Samples from the second and third quarters of 2014 showed that the well had an EDB level that was higher than the MCL of 50 ppt. Well 4 is the only well that was not in compliance with the MCL.

The Vineland Water Utility has discussed the appropriate water treatment for this contaminant with the NJDEP and engineering consultants. At this time, this well is off. We anticipate water treatment removal of this contaminant to be installed by mid- to late 2015.

Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from the Kirkwood-Cohansey aquifer by vertical turbine well pumps and is sent to an aerator, which oxidizes the iron levels that are present in the water and raises the pH. Some wells pass the raw water through filters on the way to the aerator to remove nitrate or radium, and some pass raw water through an air stripper to remove volatile organic compounds. The water then goes to a mixing tank where lime, chlorine and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized water towers and into your home or business.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	13.8	ND–13.8	No	Erosion of natural deposits
Arsenic (ppb)	2014	5	0	1.2	ND–1.2	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2014	2	2	0.16	ND–0.16	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	2014	4	4	0.1	ND–0.1	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	2014	5	5	0.8	ND–0.8	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Combined Radium (pCi/L)	2014	5	0	5.13	ND–5.13	No	Erosion of natural deposits
Ethylene Dibromide (ppt)	2014	50	0	116	ND–116	Yes	Discharge from petroleum refineries
Fluoride (ppm)	2014	4	4	0.0405	ND–0.0405	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 2 (ppb)	2014	60	NA	2.36	ND–2.36	No	By-product of drinking water disinfection
Mercury [inorganic] (ppb)	2014	2	2	1.7	ND–1.7	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nickel (ppb)	2014	100	NA	4.6	ND–4.6	No	Pollution from mining and refining operations; natural occurrence in soil
Nitrate[2] (ppm)	2014	10	10	8.4	1.67–8.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2014	50	50	3.9	ND–3.9	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	13.74	ND–13.74	No	By-product of drinking water disinfection
Thallium (ppb)	2014	2	0.5	0.24	ND–0.24	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	1.3	0.0683	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2014	15	0	1.1	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Aluminum (ppb)	2014	200	NA	559	ND–559	Yes	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2014	250	NA	22.1	ND–22.1	No	Runoff/leaching from natural deposits
Corrosivity (ppm)	2014	Non-corrosive	NA	-3.1	ND–-3.1	No	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; Affected by temperature and other factors
Fluoride (ppm)	2014	2	NA	0.0461	ND–0.0461	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Foaming agents (ppb)	2014	500	NA	148	ND–148	No	Municipal and industrial waste discharges
Hardness [as CaCO3] (ppm)	2014	250	NA	45.4	ND–45.4	No	Naturally occurring
Iron (ppb)	2014	300	NA	83	ND–83	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2014	50	NA	39.4	ND–39.4	No	Leaching from natural deposits
pH (Units)	2014	6.5-8.5	NA	7.43	6.76–7.43	No	Naturally occurring
Silver (ppb)	2014	100	NA	0.17	ND–0.17	No	Industrial discharges
Sodium (ppm)	2014	50	NA	23.3	ND–23.3	No	Naturally occurring
Sulfate (ppm)	2014	250	NA	16.5	ND–16.5	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2014	500	NA	137	ND–137	No	Runoff/leaching from natural deposits
Zinc (ppm)	2014	5	NA	0.0304	ND–0.0304	No	Runoff/leaching from natural deposits; Industrial wastes

[1] Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received a monitoring waiver for synthetic organic chemicals.

[2] Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

RUL (Recommended Upper Limit): RULs are established to regulate the aesthetics of drinking water like taste and odor.